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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/602,345	06/23/2000	William S. Oakley	053313.P017	1324

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EXAMINER

PHAM, HAI CHI

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 12/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/602,345

Applicant(s)

OAKLEY, WILLIAM S.

Examiner

Hai C Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/24/03.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 and 20-22 is/are allowed.
- 6) ☒ Claim(s) 1-13, 15, 16, 19, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

FINAL REJECTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 11-13, 15-16, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiske (U.S. 6,078,468).

Fiske discloses a data storage and retrieval apparatus having a read and/or write head, which comprises a linear arrangement of Vertical Cavity Surface Emitting Lasers (92), an objective lens (microlens array 96 including focusing lens 98) for each VCSEL, and a detector (94) to receive a set of one or more beams emanated from the reading array of VCSEL and reflected from the target medium (disk 48).

Fiske further suggests that multiple heads can be used for reading and writing where "the read laser beam is of different frequency than the write laser beam" (col. 15, lines 21-25). Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Fiske to implement separate VCSEL arrays for writing and reading such that the writing array comprises a first array of VCSELs and the reading array a second array of VCSELs, the implementation of which would require only routine skill in the art.

Fiske further teaches the modulatable light sources (92) being spaced at regular intervals (Fig. 5A), the intervals being preferably about 100 μm (col. 9, lines 54-58), the writing array of modulatable light sources positioned at an angle relative to a direction of movement of the target medium, and being associated with a separate path on the target medium while writing and reading (col. 10, lines 54-59).

3. Claims 9-10, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fiske in view of Jewell et al. (U.S. 5,526,182).

Fiske discloses all the basic limitations of the claimed invention except for the a polarizing type beam-splitter, and the circularly polarizing plate or quarter wave plate positioned adjacent tot the polarizing type beam splitter, and the multidimensional writing and reading arrays.

However, Jewell et al. discloses an optical recording system comprising an array of modulatable light sources (array 35, Fig. 7,) which can perform both reading and writing data (col. 5, lines 59-63,) and an objective lens (focusing lens 47) positioned relative to said array of modulatable light sources such that said objective lens is capable of focusing at least one light beam from said array of modulatable light sources on a target medium (optical recording medium 8,) the array of modulatable light sources comprising an array of VCSELs (Fig. 7), and a detector (48 and/or 64) to receive a set of one or more beams, the set of one or more beams having emanated from the array of VCSEL and the set of one or more beams having reflected from the target medium. Jewel et al. further teaches the modulatable light sources being spaced at regular

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intervals (Figs. 1-4), the writing array of the modulatable light sources comprising at least one line of modulatable light sources positioned at an angle relative to a direction of movement of said target medium (Fig. 1), each modulatable light source being associated with a separate path on said target medium (Fig. 5), a polarizing beam-splitter (38) located between the light sources and the objective lens, and a circularly polarizing element as a quarter wave plate (39) located adjacent said polarizing beam-splitter. Jewell et al. further teaches the writing and reading arrays can be either of one-dimensional or multi-dimensional light source arrays (Figs. 1-4).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Fiske with the aforementioned teachings of Jewell et al. The motivation for doing so would have been to allow the writing/reading system to attain high optical efficiency as suggested by Jewell et al. at col. 7, lines 61-65.

Allowable Subject Matter

4. Claim 22 is allowed.
5. Claims 14, 20-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1-13, 15-16, 19, 23-24 have been considered but are moot in view of the new grounds of rejection as presented in this Office action.

Conclusion

7. Applicant's amendment, which changed the scope of the base claims, necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C Pham whose telephone number is (703) 308-1281. The examiner can normally be reached on T-F (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin R. Fuller can be reached on (703) 308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722, (703) 308-7724, (703) 308-7382, (703) 305-3431, (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



HAI PHAM
PRIMARY EXAMINER
December 19, 2003